

CLAIMS

What is claimed is:

- 1 1. A sonde for detecting at least one downhole condition, comprising:
2 a housing that defines at least one interior chamber for housing an electronic
3 component;
4 a sensor operably associated with the housing for detection of at least one
5 borehole condition;
6 a side entry leak protector connector assembly retained within the housing and
7 comprising:
8 a generally cylindrical metallic body; and
9 a conductive element that is glass-sealed within the body, the conductive
10 element being formed for interconnection to at least one conductive member
11 within the housing.
- 1 2. The sonde of claim 1 wherein the body of the side entry leak protector connector
2 assembly includes a circumferential channel.
- 1 3. The sonde of claim 1 wherein the body of the side entry leak protector connector
2 assembly further includes an axial passage through which additional wiring may be
3 disposed.

1 4. The sonde of claim 1 wherein the sensor is disposed upon a radial exterior of the
2 housing.

1 5. The sonde of claim 1 wherein the sensor is disposed within the housing.

1 6. The sonde of claim 5 wherein the sensor is disposed upon the side entry leak
2 protector connector assembly.

1 7. The sonde of claim 1 wherein the housing defines a pair of interior chambers for
2 housing electrical components and an axial passage interconnecting the interior
3 chambers.

1 8. The sonde of claim 7 wherein the axial passage is defined off-center from a
2 central axis of the sonde housing.

1 9. A sonde for detecting at least one downhole condition, comprising:
2 an outer housing;
3 a sensor operably associated with the housing for detection of at least one
4 borehole condition;
5 a side entry leak protector connector assembly retained within the housing and
6 comprising:
7 a generally cylindrical body with a pair of axial ends;
8 a conductive element retained within the body; and

9 glass sealing encasing said conductive element within the body.

1 10. The sonde of claim 9 further comprising an electrical pin connector associated
2 with said conductive element, for electrically connecting the conductive element with an
3 external conductor.

1 11. The sonde of claim 9 further comprising a circumferential channel surrounding
2 the body for capturing fluid therewithin.

1 12. The sonde of claim 11 further comprising a pair of o-ring seals disposed upon
2 the body to preclude escape of fluid from the channel.

1 13. The sonde of claim 9 wherein the outer housing defines two interior chambers
2 for housing electronic components and an axial passage that interconnects the two
3 chambers and wherein the side entry leak protector connector assembly is retained
4 within the axial passage.

1 14. The sonde of claim 13 wherein the housing defines a lateral passage from the
2 axial passage to an exterior radial surface of the housing.

1 15. The sonde of claim 11 wherein a sensor element is disposed within the channel.

1 16. The sonde of claim 13 wherein the axial passage is defined off-center from a
2 central axis of the sonde housing.

1 17. A method of providing fluid sealing and electrical connections within a sonde
2 comprising the steps of:
3 providing a sonde housing that defines therein an interior chamber for retaining
4 an electronic component and an axial passage therewithin;
5 providing a lateral passage from the axial passage to a radially exterior surface
6 of the sonde housing;
7 associating a sensor component with the lateral passage; and
8 disposing a side entry leak protector connector assembly within the axial
9 passage to provide a fluid seal between the lateral passage and the axial passage.

1 18. The method of claim 17 further comprising the step of establishing an electrical
2 connection between the sensor component and the side entry leak protector connector
3 assembly.

1 19. The method of claim 18 further comprising the step of establishing an electrical
2 connection between the side entry leak protector connector assembly and an electronic
3 component housed within the interior chamber.

1 20. The method of claim 17 further comprising the step of providing a
2 circumferential channel about the body of the side entry leak protector
3 connector assembly for capturing of fluid.